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MATRIMONY BY ADVERTISEMENT.

PARSON KEITH, of Mayfair notoriety, who in his free-and-easy fashion united many thousands of couples in the bonds of matrimony, used to say, that in the generality of cases in which he had officiated the parties concerned had not known each other more than a week, while in very many instances the acquaintanceship was a matter of hours only. With such evidence of the recklessness with which folks will rush into the state that has only two exits, divorce and death, one can hardly wonder at some men being adventurous enough to seek a wife by advertisement—the most risky way imaginable of going about a business, in its own nature risky enough under the best of conditions.

One of the oldest matrimonial advertisements we know of, and at the same time a good example of the combination of commercial and sentimental ideas characteristic of such announcements, appeared in the *General Advertiser* for March 30, 1748: 'Whereas, on Saturday last, a lady, genteelly dressed, was seen to lead a string of beautiful stone-horses through Edmonton, Tottenham, and Newington—this is to acquaint her, that if she is disengaged and inclinable to marry, a gentleman who was smitten with her behaviour on that occasion is desirous of making honourable proposals to her; in which state if he be not so happy as to please, he will readily purchase the whole string for her satisfaction.' We doubt if any woman ever had a stranger option given her than the fair horse-dealer, or if any horse-dealer ever had a better chance of doing a good stroke of business. This is, however, hardly a fair specimen of matrimonial advertising, since it is addressed to a particular member of the sex; unlike the following from the *Reading Mercury* of the 13th of September 1798: 'TO THE FAIR SEX.—Ladies—Being at this time in want of a partner for life, to assist in a multiplicity of business which I am now engaged in, I have taken this public method of informing you. If any young lady of the following description would

wish to enter the holy state of matrimony—she must be genteel made, rather tall; black, brown, flaxen, or auburn hair; age from twenty-five to thirty-five; widow or maid; if a fortune, will settle the same upon the lady and offspring, wishing to act upon the strictest honour. Such lady, by letter post-paid or personal application, to Mr Timothy Surrell, yeoman, Quality Court, Charnham Street, Hungerford, Berks, will meet with a welcome reception.—N.B. To avoid extra expenses, Mr Surrell would wish to keep his wedding and harvest-home the same evening, which will be within fourteen days from the present date, as he particularly wishes the lady to preside at table that evening.' Mr Surrell evidently believed that happy is the wooing that is not long a-doing.

He is not so communicative about himself, as a Yorkshire farmer who advertised a couple of years back: 'Wanted, a Wife, by a handsome young farmer, who is desirous of becoming domesticated, and of enjoying the society of a young, good-tempered female, who would tempt him away from his market festivities, by her pleasing and gently persuasive manners. She must not exceed twenty, unless she be a widow, whose family must not exceed six. Want of beauty would be no kind of objection, provided she possessed from one to two thousand pounds. His rent, tithes, and taxes are all paid up, and he is wholly free from debt. All that he requires is love, peace, and happiness.' Perhaps he was in a fairer way of obtaining those three blessings than the redskin Kabesheidoway whose wigwam and heart were so very big, he felt compelled to give the Minnesotan maidens a chance of competing for the honour of becoming Mrs K. number four. The most impertinent thing of the kind we have seen appeared in a Scotch daily paper not very long ago, and ran thus: 'MATRIMONY.—A young man, of good position, and all that sort of thing, wishes to correspond with a young lady; age under twenty-five, good-looking, of a pleasant temperament, and accomplished. Money no object, at same time no objection. Address, Sylvanus, &c.' He got his answer through the same medium: 'MATRIMONY.—A young lady,

rising twenty-four, beautiful, of genial temperament, and all that sort of thing, recommends Sylvanus to apply to Brigham Young, Wife Nurseries, Utah!

Master Sylvanus might consider himself lucky in being let off so easily. Such advertisers run no little risk, being looked upon as fair game by practical jokers, as many a wife-hunter has found to his cost. This may perhaps be the reason why these announcements have hitherto emanated almost entirely from the sterner sex. The ladies, however, have shewn no backwardness in making their desires known when publicity has been offered gratuitously. A certain class of periodicals have for some time past constituted themselves go-betweens betwixt the knavish of one, and the fast and foolish of the other sex, and apparently have found their account in so doing. Probably it was their success put the notion into the head of an enterprising individual that a journal devoted entirely to match-making might prove a profitable speculation; and the result we have before us, in the—well, we have no intention of advertising it here—*Hymeneal Advertiser*, let us call it. Like all new literary ventures, it of course supplies a national want, and makes sure of receiving a generous support from an appreciative public. Civilisation, we are told, combined with the cold formalities of Society and the rigid rules of Etiquette, imposes such restrictions upon the sexes, that there are thousands of marriageable men and women, of all ages and conditions, capable of making each other happy, who have no chance of ever coming together either in town or country; therefore, the desirability of having some organ through which ladies and gentlemen, pining unwillingly in single wretchedness, can be honourably brought into communication, is too obvious to require demonstration. Desperate maidens, bashful bachelors, disconsolate widows, and consolable widowers, need despair no longer; they can now make known their connubial qualities and requirements for the small charge of sixpence; confiding their names and addresses to the editor of the *Hymeneal Advertiser*, who will bring any lady and gentleman desiring it into direct correspondence with each other upon receiving an additional fee (amount unstated), with the understanding, that in case they have in the end to call in the aid of a clergyman, the gentleman comes down handsomely when the honeymoon is over. What a touching piece of confidence—to allow the settlement to stand over until the happy man has had time to ascertain the value of his bargain! Our readers, who have never felt how hard it is to find some one suited to their mind, may ask, is it possible any one can seek a life-partner in such business-like fashion? Our answer is this—in one number of this precious and peculiar publication (at the time we write, some six months old) are no less than a hundred and eighty-two inquiries for husbands and wives—eighty-eight for the former, and ninety-four for the latter. How many are genuine, is another matter; let us swallow all doubts, and see what they are like.

Among the ninety odd would-be Benedicts, of whom thirteen are widowers, we find a dozen officers, and the same number of business men, eight professional gentlemen, four literary men, two private tutors, a schoolmaster, and a proprietor of a college for young gentlemen; two engineers,

one clerk, one musician, one vocalist, two tradesmen, one respectable man, one gentlemanly young man, and three clergymen—so that there is variety enough, so far as calling is concerned. The ages of these candidates for matrimonial honours vary from nineteen to sixty-seven, while their incomes range between eighty and two thousand pounds per annum. The majority are discreetly silent respecting their personal merits, but some rely upon their tallness, some upon their gentlemanly appearance. One thinks a remarkably curly head of hair sufficient to tempt some fair lady to share his lot, while another evidently thinks his long whiskers irresistible. Of course, all would make excellent husbands; but one individual with a dark complexion, long whiskers, and black moustache, who prides himself upon dressing well, emphatically declares *he* should make 'an awfully good husband.' The wonder is how—if the British matron be so intent upon marrying off her daughters as we are always being told she is—such prizes remain upon the market. We can understand how a 'Sea-king,' as he calls himself, who has commanded his own ship all over the world, may have escaped, spite of his enjoying good health and being organised to make a suitable companion for a lady; but it is strange that a man of good family, well proportioned, with dark hair, hazel eyes, possessed of an affectionate heart and refined tastes, fond of home, poetry, and music, and blessed withal with ample means to keep up an establishment, should be reduced to advertise his want of a wife.

The gentlemen are not very exacting as regards personal attractions, but, with very few exceptions, they are not prepared to accept a dowdier bride, some contenting themselves with demanding the possession of 'private means,' while others set down a good round sum as the price for which they are ready to barter their liberty. A modest captain, who impudently assumes V. C. as his initials, proposes what he styles a good match to any lady having an income of at least five hundred a year, who may be willing to purchase him a majority, and pay off five hundred pounds' worth of debts. Certainly, some of the matrimonial sharks give the opposite sex credit for very little sense. One of them, owning to being in the sear and yellow leaf, who boasts the possession of a poetical eye, a strong beard beginning to turn gray, and an income of from a hundred and twenty to eight hundred pounds, 'according to circumstances,' requires a gushing young creature of twenty, with dark eyes, a bright complexion, an excellent temper, and domestic habits, and last, but by no means least, an income of five or six hundred a year. A D.D. of the mature age of sixty-seven, a childless ten years' widower, with first-class connections, and great conversational powers, who is, according to his own account, a good reader and preacher, 'who has been a great traveller, a published poet, and good painter for an amateur'—a clerical Crichton, in fact—seeks a kind widow of forty or thereabouts, who could help him to a small living in the country, where he could settle down—time he did, we should say.

Another old fellow of sixty, who lost five thousand pounds by the panic, but still has a thousand left, asks, will any lady have compassion upon him and 'settle down snug.' He has a rare and novel collection of antique watches worth five hundred pounds, and would be glad if any lady

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would come forward with a temporary loan of half that amount, to enable him to establish a home in beautiful Normandy, she having the preference to share it. 'Un petit Monsieur Français,' standing five feet three in his boots, thirty-three years of age, rather *distingué* than prepossessing, particularly healthy, fond of study, especially music, who has travelled in England, France, Germany, and Spain, and has an aptitude at learning languages, wants to meet with a lady who appreciates such tastes, with means to enable him to cultivate them and elevate his mind; for which purpose two hundred and fifty pounds a year would suffice; in return for which she would have, he thinks, no mean compensation in the purity and loftiness of his heart. One who is at the same time a gentleman of position and a general merchant, asks for a sincere, homely, accomplished, and travelled brunette, who is a good housewoman, and has relations in the upper branches of trade. Good looks he is not particular about, since he desires a woman of sense. Money is not indispensable; but, as he puts it, 'a religiously and seriously disposed young lady, with some present fortune of five thousand pounds and prospects, who would persevere to make their joint way in business and society, might be considered a not unfair equivalent for a hard-working young man of similar means.'

A gentleman with an income of two thousand a year from his own business in the city desires a well-connected lady for a wife. Money is not absolutely necessary, but he would rather she had an income of five hundred to a thousand pounds, so as to keep up a comfortable home, independently of business income, in case of need. The following advertisement is too good for abridgment: 'A gentleman, educated at engineering colleges, and works in this country and on the continent—civil and military, aged twenty-eight, height five feet seven and a half, light brown hair and whiskers, blue eyes, an athlete, member of scientific societies, and holding responsible professional appointments, entailed property in his own right after relative's decease, affectionate, and fond of domestic life, wishes to meet with a nice-looking gentlewoman, well educated and connected, of thorough Christian principles, and whose views agree with "Far above Rubies" in the *Christian World Magazine* for April and June; height, about five feet seven, or more, dark complexion, and with an income of not less than two hundred pounds a year. She might, if desirable, add part of this to the capital of engineering works in which he is interested, and interest guaranteed thereon at seven and a half per cent. It is considered that on being married, his professional duties and income therefrom will gradually increase, independently of her property. A widow need not answer this. References to theologians, solicitors, and medical advisers. Photograph and full particulars exchanged.'

The eighty-eight ladies distraught, like the damsel in the song, because nobody comes to marry, nobody comes to woo, are of all ages—from maidens in their teens to dames of such an uncertain age they think it best left untold—the majority being between the ages of twenty and thirty, only three—spinsters, that is to say—owning to forty, although one well-to-do maiden sets a good example by courageously confessing to forty-two. One nineteen-year-old impatiently declares all she wants to make her happy is a good husband; or, as

another of the same mature age phrases it, 'would like to take upon her the responsibilities of a wife;' to which a third young lady adds, 'Children not objected to!'

So far as beauty is concerned, men of all tastes can be suited. Admirers of blonde beauty may choose between the short, plump, blue-eyed fair one with golden locks, the pretty darling with brown hair and hazel eyes, and the tall, elegant, accomplished orphan; darker beauties run tall. Some modest creatures are contented to describe themselves as 'not bad-looking,' while one or two bolder ones advertise themselves as beautiful, or very handsome. Some are very general in their method of self-praise; others enter into detail, and catalogue their perfections after the manner of the Lady Olivia—item, so many feet in height; item, two gray eyes; and so on. Some parade their accomplishments; others, discreetly dumb on that point, put forward their capabilities for managing a household. All are affectionate, good-tempered, and fitted to make a home comfortable for the lucky man who will give them the chance. One, more cautious than her sisters, says she feels sure she could make any kind and *reasonable* man happy. Some pride themselves upon their good family, and being in the habit of moving in the best society; and one recommends herself to notice as the daughter of a gentleman of known standing in the scientific world. Some frankly own to a love of gaiety—these call themselves 'winning and attractive;' some are fond of a quiet home life—these are the 'not bad-looking' girls; some delight in poetry and all that is beautiful and true; and a select few proclaim their serious-mindedness, a qualification generally accompanied by an unusually shrewd appreciation of worldly comfort. There are fortunes going a-begging too among them, from a modest hundred and thirty a year, up to eight thousand pounds, and expectations of five times as much. These, however, are exceptions: most of the feminine aspirants for matrimony are like a dark pretty girl of twenty-three, ready to love 'any gentleman of good means willing to marry a lady for herself.' A well-educated, highly respectable lady, aged thirty-one, 'being left an orphan, would much prize the kindness of a husband to whom she would be devoted; a tall, lady-like, gently disposed young lady, belonging to an old family, whose late father was an M.P., wishes to marry a merchant or gentleman of fortune, 'as her invalid mother is badly off!' A lady, considered pretty and amiable, of very good family, and accustomed to the best society, but who can only offer the requirements of a good and affectionate wife, desires to marry a gentleman of education, refinement, and affection; 'a clergyman of evangelical principles preferred.' An inferior damsel, at present managing a hotel, would be happy to correspond with a tradesman able to keep a wife; and as a substitute for hard cash, which she does not possess, offers her business capacity, 'which would be valuable to any man in trade.' The daughter of a tradesman who is anxious to be courted by a respectable man of business, cannot offer even a business capacity, but then she is well proportioned (though short), interesting, lively, and musical, and thoroughly understands how to manage and make a home happy; and what more can a respectable man of business desire?

It is no slight compliment to that horrid creature

man, that old Mr Weller's aversions muster in strong force among the lady advertisers, making up, in fact, just one-fourth of the total number. Most of them, whether with or without 'encumbrances,' are more or less provided with worldly gear. One has a hundred and fifty pounds a year and a good house; another has two hundred a year and a most comfortable and well-furnished house; a third occupies an excellent residence at the west end of town; and a fourth, possessed of an only daughter and an income of two hundred a year, will furnish a house—out of her savings, we presume. Rendered wise by experience, the widows entertain no nonsensical ideas about love in a cottage, but rate their value at the lowest at four hundred a year, without which no suitor need apply. A blooming widow of nineteen, beautiful and highly accomplished, we have her word for it, will strike her cap at nothing under five thousand a year, with a young nobleman attached. Much more moderate are the expectations of an older matron in weeds, who has an income sufficient to defray her personal expenses; all she demands is an educated gentleman with means to keep up a respectable establishment, but he must be without encumbrance of *any kind*, or he never will do for her.

For the ladies reduced to hawk themselves about in this way, all we can say is we pity them; as to the gentlemen, we cannot wish them any happier fortune than that of the poor knight of Windsor, who, after advertising for thirty years his readiness to take to wife any rich 'angelic beauty of good breed, fit to become, and willing to be, a mother of a noble heir, and keep up the name of an ancient family,' died a bachelor.

AT CLOSE-QUARTERS WITH A WOLF.

THE 'gray beast of the forest,' as the old Norsemen used to call him, has a sadly restricted reign now-a-days. In England, he has been extinct for centuries. In France and Spain, he appears but rarely, and then, for the most part, in the neighbourhood of the Pyrenees; and the romantic tourist, who has long yearned for a chance of stuffing into his forthcoming book of travels an appropriate quotation from Macaulay—

The pass was steep and rugged;
The wolves they howled and whined—

is too often doomed to be grievously disappointed. In Switzerland, again, *ces brigands de loups* are almost unknown, except in the wilder parts of the Grisons; and even there, the enterprising sportsman, who has begun to congratulate himself on having met with 'a real live wolf' at last, frequently discovers, with mingled relief and mortification, that the huge gray beast which comes slouching toward him through the rising mist is merely a stray dog from some outlying chalet. But the boundless forests of Russia afford to this outcast from society a safe and commodious lodging, rent free, leaving him only his food to think about; which latter he provides by midnight raids into the scattered villages, in quest of a stray sucking-pig; or, better still, a homeless dog (for his civilised half-brother is always a tit-bit with 'Gaffer Isegrim'); or occasionally even by stopping

belated travellers, brigand-fashion, on the Czar's highway.* Nor is he by any means so difficult of access as many imagine; for hunger is a powerful pleader, able to vanquish the ingrained unsociability of this hereditary outlaw. Even here, in the largest and most populous city but one in Russia, one need only take a walk of three miles into the environs after dark, to see clusters of pale spots of light, like the flame of a half-extinguished coal, moving swiftly among the trees, and hear a long dreary wail, like the moan of the wind on a gusty winter-night, going up through the still, frosty air. Only the other day, I fell in with a peasant who had acquired some renown by killing one of these *chevaliers du brouillard* barely a mile beyond the Sakolniki Barrier, which bounds Moscow to the north; nor is such a case by any means exceptional.

Against these midnight marauders, the Russian mujik has various resources—the trap, the pitfall, the inseparable *topor*, or short axe, a deadly weapon in such a hand; but the programme of a regular 'wolf-hunt' in the provinces is always the same. At some abnormal hour 'between the night and the day,' you are aroused (almost, as it seems, before you are well asleep) from a rough couch in one of the little log-huts of some outlying village, by a violent shake of the shoulder, and a hoarse voice admonishing you to 'get up, and look sharp about it, for there's no time to lose.' You make a hasty toilet, and sallying forth, see in front of the hut, in the dim light of the coming morning, a huge, dark, shapeless mass (which, as your eyes get used to the darkness, assumes the form of a broad, heavy, three-horse sledge, with very high sides, not unlike an enormous washing-tub), around which are flitting three or four spectral figures with lanterns, the fitful glare making their grim bearded faces look grimmer and less human than ever. Guns, ammunition, haversacks are stowed away in the bottom of the conveyance—and (last, but not least) a young pig; your query respecting which elicits from the leader of the party only the oracular answer that 'it'll come in handy by-and-by;' and all being now ready, the hunters squeeze themselves into their places, the driver shakes his reins with a 'Wo-o-oi!' and away we go into the darkness. Mile after mile of the frozen waste goes by like a dream, till at length the spectral shadows of the forest slowly gather round us, and the squeals of our unlucky pig (whose ears one of our party is now pinching lustily) begin to be answered by another sound, which no one who has once heard it will easily forget—not the long melancholy howl wherewith a supperless wolf may be heard bemoaning himself on the outskirts of Moscow, almost any night in the week, but a quick snarling cry, as of one who sees his dinner coming, and wishes to hasten the bringer of it. And there they come at last, the gaunt, wiry, slouching fellows, with their bushy tails, and flat narrow heads, and yellow, thievish, murderous eyes. There is perhaps nothing on earth more thoroughly mean and hateful-looking, at first sight, than the genuine Russian wolf; but the rascal has a certain picturesqueness of his own notwithstanding.

* This is a common occurrence. A few weeks since, a priest and his horse were found half-devoured by wolves on one of the roads leading to Kolonna, south-eastward from Moscow.

ing, though of a disagreeable kind. There is something grand in the dogged and sinister tenacity of his pursuit; coming on, with head thrown forward, and sharp white fangs unsheathed, untiringly and unrelentingly, like a haunting Fate,

With his long gallop, which can tire
The hound's deep hate and hunter's fire.

But there is no leisure for moralising now; for the wolves are already almost level with our sledge, and it is time to let fly. Bang! The foremost of the pack rolls over on his side, kicking convulsively; but the rest gallop on unheeding. Bang! Bang! and two more fall dead, blotting the snow around them with a smear of dull crimson. Some of the boldest pursuers swarm up to the sledge, and attempt to leap over the encircling barrier; while we hammer them with the butt-ends of our pieces, and chop at their paws with hatchets, and slash them across the eyes with hunting-knives—the two hindmost of our party meanwhile cracking at them over our shoulders as fast as they can load. So for a time the running-fight goes fiercely on, making altogether a very striking tableau. The white skeleton tracery of the frozen forest; the long snaky line of the pursuing pack, shadowy and spectral, as if bodied of the mist from which it emerges; the whirling figures of the foremost wolves amid the tossing spray of snow and curling clouds of bluish smoke; the ceaseless flash of the busy rifles; the steaming horses, urged to their utmost speed; the driver, with his broad fallow face all ablaze with excitement, shaking the reins, and hanging forward to ply the whip; the huge, cumbrous sledge, rocking and reeling over the snow with its freight of struggling forms—all this, seen in the dim, uncertain light of the early dawn, has a weird and ghostly appearance, suggestive of an attack of goblin highwaymen upon one of those phantom mail-coaches in which the bagman's uncle made that marvellous journey which so much astonished Mr Pickwick. But 'the pace is too stiff to last,' as our leader observes with a knowing grin. A run at full speed through half-frozen snow tries the feet of even a full-grown wolf too severely to be continued beyond a certain time; * and, in the face of a stout resistance, the beast's inherent cowardice is sure to come to the surface sooner or later. Already three or four gaunt, shaggy-haired veterans, who have probably made a good supper overnight, begin to hang back, as if doubting the wisdom of risking their lives for a hypothetical breakfast; the speed of the rest slackens by degrees; and at length the whole pack drop off, as if by tacit agreement, leaving us to pursue our way unmolested. As we emerge again into the open plain, across which the first beams of the rising sun are just beginning to fall, we see the last of our grim followers slinking away like a belated spectre into the ghostly shadows of the forest that we have quitted.

Such, I have said, is the usual programme of a wolf-hunt; but in the wilder regions, where scanty population and untravelled roads give the wolf a wider dominion, the sport often assumes a sterner and more tragical cast. Last December, I happened to be unexpectedly detained at a small outlying hamlet in the Vilna district (the name of which I

do not remember), and almost the first man I lighted upon there was a German engineer whom I had formerly known at Königsberg, and who now insisted upon making me his guest till I could get forward toward Smolensk. We sat late over a very primitive supper, and my host (who is a keen sportsman) was just hinting at the possibility of getting up a hunt for the destruction of a wolf of uncommon size and strength, which had lately haunted the neighbourhood, and committed great ravages—when a terrible noise from the upper end of the village, like a score of voices all shrieking at once, broke in upon our chat.

'Ach lieber Gott! was ist das?' cried my companion, rushing to the door, and throwing it open. The whole place seemed in the height of confusion; men were running wildly hither and thither, women screaming, children crying, lights glancing to and fro. I seized the arm of a man who was rushing past, and hastily asked what was the matter.

'Wolf again!' gasped the fellow, who could hardly speak; 'up yonder—woman devoured—run for the watchman; and away he flew.

The next moment, my comrade and I were running at full speed toward the scene of the catastrophe, on reaching which, we came suddenly upon a spectacle which I shall not easily forget. The fitful glimmer of the rising moon, and the dying glare of a fire kindled overnight, in the vain hope of scaring away the wolves, lit up a circle of wild figures and grim bearded faces, convulsed with every varying form of passion—dumb horror, blank astonishment, panic fear, the spasm of bitter sorrow, the stern calmness of concentrated wrath. In the background, the gaunt white arms of the leafless forest stood out against the surrounding blackness like giant skeletons; while, in the centre of the group, half-buried in the trampled and blood-besmeared snow, lay a motionless, shapeless something, from which all involuntarily averted their eyes—the lifeless wreck, mangled out of all semblance of humanity, of what had been but a few hours before the pride of a happy household and the beauty of the village.

There are certain catastrophes in the presence of which every one is instinctively silent. For several moments not a word is spoken; and in that dead pause of expectation, I have leisure to remark the face of a peasant who stands opposite me. He is a young man of twenty-five or twenty-six, though his broad chest and powerful limbs, as well as the magnificent brown beard that waves over the bosom of his sheepskin frock, might make him appear much older. His face is coarse and weather-beaten enough; but there is something in that broad low forehead, and square ruthless jaw, and small, deep-set, glittering eye, which tells you at a glance, that, whatever danger might confront him, that man would be very hard to turn. While I am still looking at him, he suddenly steps forward and speaks: 'It's time to finish this,' says he, in a tone which there is no mistaking. 'Who will come with me into the forest, and make an end of that brute, once for all?'

The summons does not remain long unanswered. There is no braver man living than the Russian peasant, when his naturally sluggish blood is once fairly up. Three men instantly volunteer to join him; while my German friend and I (already sufficiently excited by all that we have seen and

* In Sweden, wolves are often literally 'run down' in this way, without the use of firearms at all.

heard) hasten to follow their example. Our preparations are soon made, and about two in the morning, under the full splendour of the winter moonlight, we set forth on the trail of the destroyer. There is but one gun among the six of us, the rest being armed with clubs and hatchets; but the German has likewise a short hunting-knife, which has done him good service before now.

Tramp, tramp it has been for miles, without sight or sound of our lurking enemy; and the Russians, unused to such severe marching, begin to fall behind. The German, myself, and one of the peasants at length find ourselves alone, and halt, in order to give the other three time to come up. Already their steps are heard crunching over the snow, and, a few moments later, the dark figures come gliding toward us through the floating shadow; but, to our astonishment, instead of three men, only two make their appearance. Our leader is still missing.

'Where is Michael?' asks the German. The men look at each other without answering, and every face reflects the same look of dismay; for we all know what going astray in a Russian forest in winter really means. In the dead hush that follows, we suddenly hear a distant cry—not the deep manly shout of a hunter calling to his mates, but the shrill agonised yell of a man in his extremest need—the cry of the climber who feels his hold relaxing, of the swimmer who finds his limbs failing him. The next moment, we are all fleeing in the direction of the sound.

Michael, while quickening his pace to catch us up, had been brought to a halt by the bursting of his shoe-strap, and must stoop to adjust it. But there is *one* watching him who fully appreciates that defenceless posture. Poor Michael does not hear the rustle of that stealthy tread—does not see the gleam of that fierce yellow eye; but he cannot fail to hear the sharp crackle of the dead branches as a huge grayish mass shoots from the dark thicket, and falls right upon him as he rises, clutching fiercely at his unprotected side with its sharp white fangs. Yet even in this deadly peril, the brave fellow does not lose heart. One moment's grace is allowed him, while the assailant's teeth fail to pierce his tough sheep-skin frock; and that moment suffices. The wolf's head is under his left arm-pit—in an instant his powerful arm is round its neck, jamming the beast's throat in an iron clasp between his side and elbow; while with his right hand he seizes its fore-paw, and holds the brute as in a vice, lifting his voice at the same moment in a wild cry for help. And now begins a terrible struggle. No time to snatch up the trusty axe which has fallen just in front of him—it is a tug of sheer strength now. The wolf, erect on his hind-legs, strains every nerve to tear himself free; once free, one strangling gripe of Michael's throat will pay for all. Hold on, as you love your life! though your joints crackle, and your sinews start, and your head swim dizzily, hold on still—tighter, tighter, tighter! And so, amid the tomb-like shadows of the lonely forest, with the cold moon looking pitilessly down upon it, does the death-grapple proceed. That iron pressure is beginning to tell at last—the fierce yellow eyes are growing dim, the huge jaws writhe convulsively, and from their edges the hot flakes of blood and foam spurt from Michael's face. But how long can that hold be maintained? Are not the strained muscles already yielding? the stiffened

fingers already relaxing their clutch? And the five staunch comrades who would rush to the rescue if they but knew—where are they? One last despairing cry for aid, which the echoes of the lonely forest give back as if in mockery—and then everything swims around him, shadows dance before his eyes, a rushing, roaring sound sweeps past him, there is a dull crash close to his ear—and he falls exhausted to the earth.

'Was für ein Thier!' says the German admiringly, tearing his reeking knife from the throat of the monster, whose skull is literally shivered by the formidable hatchets.

When we lifted Michael, we found him, to our astonishment, completely unwounded, though utterly spent with his superhuman exertions. His first act on coming to himself was sufficiently characteristic. After crossing himself devoutly, and murmuring a few words of prayer, he staggered up to the spot where the wolf lay dead, and, bending over it, said with a taunting grin: 'Noo, brat, ya vigrat, shito li?' (Well, brother, I've won, haven't I?)

We rewarded the brave fellow as he deserved; but in the hope of obtaining him a further reward from the government, we thought it best to publish the whole story in one of the local Russian papers, whence it soon after found its way into the journals of the metropolis, exciting thereby an interest in behalf of the hero, which is now (I am glad to learn) likely to bear abundant fruit.

ALEXANDER SETON, THE SCOTTISH ALCHEMIST.

In the summer of 1601, a large Dutch ship, by a sudden storm, was cast away near Seton, on the shores of the Firth of Forth. Jacob Haussen, the captain of the vessel, was hospitably received into the house of the principal neighbouring landowner, and the seamen of lesser note into the houses of his tenants. A warm friendship seems to have sprung up between the Dutch skipper and the Scotch laird, which was not diminished by the latter promising to visit him in Holland some fine day.

Neither the history nor the antecedents of the very remarkable and mysterious man who is first revealed to us by this benevolent action, are correctly known. The usage, too, in his time, of Latinising the names of scientific persons and scholars, contributes to the uncertainty. We find him called Sethonius, Sithonius, Sidonius, Sathoneus, Suetonius—most probably after the name of his estate, or the town of Seton in its neighbourhood. Still, there can be no doubt as regards his Christian name and nation. We always find him called Alexander, and the epithet *Scotus* is invariably applied to the above-mentioned appellations, which all refer to one and the same person.

Early in the following year, without any previous intimation, Seton, as we shall term him, walked into the house of Haussen, in the little Dutch seaport of Enkhuysen, and was as warmly welcomed as his own hospitality merited. He remained several weeks in the house of the grateful sea-captain, till the time arrived when he had planned to depart on his continental tour. The day before he left, Seton, taking his host to one side, disclosed that he was an alchemist, saying also that he wished to leave behind him a token of

his skill, as well as a memorial of his happy visit to Enkhuysen. Then producing a crucible and a piece of lead, he converted the latter metal into a piece of gold of the same weight, which he left as a souvenir with Haussen. The worthy sailor, being ignorant of chemistry and metallurgy, has not left us any account of the operation, though fully able to appreciate its extraordinary result. He gave the piece of gold to one Vanderlinden, his medical attendant, from whom it descended as an heirloom to his grandson, Jean Vanderlinden, a writer on medical literature. Preserved as a valuable proof of alchemy, it has been traced from savant to savant, from museum to museum, down to nearly the close of the last century. Moreover, it was shewn by Jean Vanderlinden to the celebrated writer Morhof, to whom we are indebted for the preceding story; and who further informs us, in his *Epistola Transmutationis*, with a preciseness worthy of chronicling such an important event, that the projection was made by Seton on the 13th March 1602.

After he departed from Enkhuysen, our adept went to Amsterdam and Rotterdam; thence he must have proceeded to Italy, where he remained but a short time; for Dienheim, in his *Minerali Medicina* speaks of travelling with him in the same year. We should observe here that previously Dienheim had been a decided unbeliever in the secrets of alchemy. 'In the latter part of 1602,' he writes, 'as I was returning from Rome to Germany, I travelled with a man, short in stature but stout, with a fair complexion, and a brown beard trimmed in the fashion of France. He was very well dressed in black satin, and conversed with me in Latin upon philosophical subjects, shewing himself thereby to be a gentleman and scholar. This man called himself Alexander Seton, said he was a native of Scotland, and for his suite had one domestic only, with red hair and beard, a countryman of his own, named William Hamilton. At Zürich we hired a boat to go by water to Basel, that we might call on Professor Zwinger. When we arrived at Basel, Seton said to me: "You may remember that in the boat coming here you attacked alchemy and the alchemists. I did not answer you then, preferring proof to mere wordy contradiction. Come now to the house of a goldsmith where I can get the necessary materials, and there I will demonstrate to you the truth of alchemy." Seton, Zwinger, and I then went to the house of a goldsmith; Zwinger brought some lead with him, and I bought some sulphur as we walked along. Seton did not touch one of the materials; he merely ordered us what to do. The goldsmith's fire being made up, he told us to put the lead and sulphur in a crucible, to put on the lid, and then melt it. He chatted unconcernedly with us for about a quarter of an hour; when the lead being melted, he said, taking a paper out of his pocket: "Throw the contents of this paper on the melted lead." I saw what was in the paper: it was a heavy powder of a yellow colour. Although we were both as incredulous as St Thomas himself, we did as he commanded. After the mass had been on the fire another quarter of an hour, he desired the goldsmith to empty the crucible in water; and then we found no lead, but a piece of gold, weighing just as much as the lead from which it had been transmuted.'

The goldsmith certified to the purity and excel-

lence of the gold thus produced; and Zwinger also gives an account of the affair, as well as another transmutation performed by Seton at Basel. These last are printed in the *Ephemerides* published by Professor König, at Basel. Seton gave Zwinger a piece of the gold thus transmuted from lead, and it was long after preserved and exhibited at the university of Basel as one of its greatest curiosities.

In the summer of 1603, Seton was at Cologne. His adventures there are related by Hogheland in his *Historia Transmutationis*. According to his usual practice on arriving at a strange place, he inquired for persons who studied chemistry; but after some search, his servant, the colour of whose hair is so carefully remarked by Dienheim, could only discover a distiller. This individual, however, knew an amateur alchemist, a man of ability and scholarship, named Anton Bordenmann. To this individual Seton went, and found a welcome.

After stopping a month with Bordenmann, Seton, on the 5th of August, entered the shop of an apothecary named Morshisher, and asked for some lapis-lazuli; but finding fault with the quality of the article shewn to him, he was told that if he called the following day, he could be supplied with a superior kind. At this moment, the shop was full of people, among others an old, retired apothecary, named Raymond, and an ecclesiastic. These two, seeing a stranger asking for lapis-lazuli, suspected him to be an alchemist, and mischievously attempted to turn him into ridicule. Seton modestly affirmed that he considered the transmutation of inferior metals into gold to be a possibility, and, further, that there were persons capable of doing it. The would-be wits, having attained their end, burst out into a loud explosion of laughter, which was re-echoed by the shopmen and apprentices; while Seton, with some show of indignation, walked out of the shop. The next day, however, he returned, and finding that the apothecary had procured a superior kind of lapis-lazuli, he purchased a few stones, and then asked to see some antimony. Objecting to its quality, he expressed a doubt whether it was pure enough to resist the action of fire. The apothecary, piqued at the genuineness of his goods being questioned, sent his son with Seton to the shop of a neighbouring goldsmith, named Lohnsdorf, to have the antimony tested. There the goldsmith, placing the antimony in a crucible, heated it to redness in his furnace. Seton then taking a paper, containing a reddish powder, out of his pocket, took up a morsel of it on the point of his penknife, and asked the goldsmith to throw it into the crucible. This being done, and an increased heat applied for a few minutes longer, the crucible was taken from the furnace, and found, instead of antimony, to contain a globule of pure gold. The apothecary's son, the goldsmith's two journeymen, and a neighbour, who happened to be in the workshop, burst out with expressions of wonder and surprise. The goldsmith alone, with an incredulous sneer, declared his dissatisfaction with the experiment. He said he had seen plenty of similar sleight-of-hand tricks performed before. Seton replied that, in this instance, there could not be any sleight-of-hand tricks, for he had never touched the crucible.

'You did not,' retorted Lohnsdorf; 'nor did I test the antimony, which, no doubt, was mixed with gold dust before you brought it here.'

This, however, the apothecary's son as sturdily denied.

'Well,' continues the goldsmith, 'to end all argument, here is a piece of lead. I shall put it in this clean, unused crucible; and do you, Master Alchemist, make gold out of it, if you can. Then I shall believe in transmutation, but not before.'

Seton nodded assent. The goldsmith put the lead into the crucible, furtively slipping in along with it, at the same time, by way of making assurance doubly sure, a small piece of zinc, a metal which he considered would render the best gold brittle, and incapable of being worked. Again, a small quantity of Seton's powder was projected on the fused metal, and again was the crucible taken from the fire, and found to contain perfectly pure, malleable, and ductile gold. The goldsmith acknowledged himself convinced, disclosing his trick of attempting to embarrass Seton by stealthily placing zinc in the crucible. The news of the experiments resounded all over Cologne. The frequenters of the apothecary's shop ceased to laugh at the transmutation of metals, and popular opinion veered round in favour of alchemy. Seton, though anxiously sought for in Cologne, did not venture to shew himself in public again, but resided quietly in the house of his friend Bordemann.

There was a party, however, in Cologne, headed by a skilful surgeon named George, who were not convinced. George had written against alchemy, and was so fully satisfied of its sin and folly, that he would not condescend even to witness an alchemical experiment. To lead such a person to a change of opinion was a difficult task, but our perverid Scot boldly attempted it, and was rewarded by fully succeeding in converting him. Seton managed, through Bordemann, to be introduced to George as one of his own profession, travelling in pursuit of surgical knowledge. In the course of conversation, he inquired how the German surgeons removed diseased flesh that could not be operated on with the knife. George, in reply, mentioned the several escharotics then in use. Seton then told him that the Scottish surgeons had recently discovered a preparation which ate away diseased flesh without any pain, and without injuring nerves, muscles, or veins. The German, acknowledging the very great value of such a preparation, expressed a wish to know its ingredients. The other affirmed it was a compound of sulphur and lead; and added, further, that if the surgeon would get him a small quantity of those minerals, he would at once shew him how to make it. George immediately ordered his assistant to go and purchase some sulphur and lead; and on Seton saying that a furnace and crucible would also be requisite, the unsuspecting surgeon proposed that they should at once go to the laboratory of a goldsmith of his acquaintance, and the assistant was told to meet them there with the articles he was sent to procure. Accordingly, Seton and the surgeon went directly to the workshop of one Hans Kempen. Hans was not at home, but his son, four journeymen, and an apprentice were at work in the place. While waiting for the arrival of the assistant, Seton entered into conversation with the workmen as to the best method of converting iron into steel, and offered to shew them a better way than they were acquainted with. He then, apparently in pursu-

ance of his conversation, requested the goldsmith's son to put a piece of a common iron nail into a crucible, and place it on the fire. As this was being done, George's assistant entered with the lead and sulphur which he had been sent to purchase; and these also, by Seton's directions, were placed in another crucible, and put on the fire. When the metals became fused, Seton added the powder in his usual manner, desiring them to put on more charcoal, and keep up a brisk fire by blowing. In a few minutes after, when he desired that the crucibles should be taken from the fire, George's assistant cried out: 'The lead is changed into gold;' while the goldsmith's son exclaimed, almost at the same time: 'There is gold in my crucible also.' In short, the contents of each crucible were turned into gold. The apprentice ran and called the goldsmith's wife, who, used to assays, said it was pure gold, and offered to buy it at the usual price; but Seton gave one piece to George, the other to the workmen. The goldsmith's wife then ran and told the wonderful occurrence to the neighbours; the journeymen hurraed at the honour done to their shop by so distinguished an alchemist, and a large crowd collected round the door, through which Seton and the surgeon with great difficulty forced their way. When they had got clear of the crowd, the surgeon said to the adept: 'It was then in reality an alchemical experiment which you brought me to witness?'

'Undoubtedly it was,' replied Seton: 'you were too incredulous to believe that I could convert an inferior metal into gold, though you could swallow the gross absurdity that I could make an escharotic which would burn flesh without pain, or injury to blood-vessel or nerve. I heard that you would not witness an alchemical experiment, so I adopted this mode of convincing you of the truth, as I have already convinced many other learned and scientific men in the various cities I have visited.'

'But, my dear friend,' said George, 'you have acted very imprudently. If ever the German princes hear of your operations, they will find you out, and imprison you for life, as a means of obtaining your secret.'

'I am not ignorant of their rapacious cruelty,' replied Seton; 'but as Cologne is a free city, I have nothing to fear from princes here; besides, if a prince were to seize my person, I would suffer a thousand deaths before I would reveal my secret. If he asked for a proof of my art, I would willingly give it; if he wanted gold, I would make him any quantity. What need, then, have I to fear any sovereign?'

We should observe here, that the cruelty practised by the petty princes of Germany at that time to the alchemists was well known to be excessive. Perpetual imprisonment was the least punishment they might expect from them. Some of the sovereigns had a gallows, decorated with gold-leaf, to hang them upon, if they did not succeed in making gold; while imprisonment for life, or till the avowal of their secret, was the fate of those who were considered to be able to produce at will the precious metal.

The surgeon immediately became a convert to alchemy; and to the remonstrances of his friends only said: 'I cannot doubt my own eyes.' Seton made another projection in Cologne, in which, though he used but one grain of his powder, he

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made six ounces of gold. Bordemann, rather indiscreetly, asked him why he had used sulphur in place of mercury in this experiment. 'I have merely used it,' replied Seton, 'to shew that any metal can be changed into gold: but you forget, my friend, that I cannot reveal anything important relating to my work.'

Our limited space will not enable us to detail the one half of what is related about Seton's marvellous deeds. From Cologne he went to Hamburg, and from thence to Munich, where he married a daughter of one Adam Rockosch. We next find him at Crossen, where the Prince of Saxony heard of his fame, and wished to see a specimen of his handiwork. Seton accordingly sent Hamilton with some of his powder of projection to the Prince, who fully satisfied his Highness. Whether a married adept was an anomaly, or Hamilton after his interview with the Prince became frightened, the servant parted with his master, or friend—for no person was aware of the relations between them—and returning to England, we hear of him no more. Seton then seems to have lost his usual prudence, for he visited the court of the Elector of Saxony.

Prince Christian was at first delighted with him; but Seton refusing to reveal his secret, was put to the torture, and then thrown into prison. A person named Michael Sendivogius, an able chemist, was then a favourite of the Prince; he got leave to visit Seton in prison, where the two made a bargain for the prisoner's escape. Sendivogius raised a sum of money, bribed the guards, and succeeded in conveying Seton to the palatinate of Cracovia, out of the territories of the Prince. Here Sendivogius demanded his secret; but Seton excused himself, saying he could not commit so great a sin, and counselled his rescuer to ask it from God. In January 1604, Seton died from the effects of the torture inflicted by Prince Christian's cruel rapacity. Sendivogius at once married his widow, from whom he obtained a small quantity of Seton's powder of projection and an alchemical manuscript, entitled *The Book of Twelve Chapters*. This last he published at Cracow, with the motto, *Angelus doce mihi jus*, which, being the anagram of his own name, caused the book to be attributed to him. The old alchemists, like the Spanish bull-fighters and the English prize-fighters, always adopted a fancy name, by which they were known to their admirers. That of Seton was the Cosmopolite: this also Sendivogius basely adopted. As long as Seton's powder of projection lasted, Sendivogius lived in great style, as we are told by Morhof. After it was exhausted, he fell into poverty, becoming a mere charlatan, and died in Cracow, at the age of forty-eight, in 1626.

The present state of scientific knowledge, and in fact the real spirit of chemistry, is rather favourable to the ideas of the ancient alchemists, and forbids us from considering it impossible to change one metal into another. But the history of science does not say that such a deed was ever accomplished.

The above testimonies, furnished by contemporaries of whom we cannot suspect the truth or the learning, would certainly be considered adequate to establish any fact of the natural kind. But we cannot hold them sufficient to prove an act of a marvellous description, one against the common laws of nature, as we at present interpret them. Reason tells us that a skilled conjurer, a professor

of the art of legerdemain, could easily have done all, and even much more than is attributed to Seton. Let us look, then, a little closer into the case. Seton seems to have adopted for his mode of action the keeping of a secret of the manufacture of his powder of projection—most probably some oxide of gold—while he was never tired of exhibiting its effects. The actual truth he thus eluded, while he furnished a proof, which left no resource to the opponents of alchemy. The state of actual science permits us now to see these things in their true light; it tells us that Seton's proofs were no proofs at all, because they were merely addressed to the eyes.

In short, we cannot but conclude that the philosophical mission to which Seton seems to have consecrated his very existence had no other object than the propagation of a falsehood—no other end than his own personal fame. A learned and skilful student, he had most probably discovered, during his scientific researches, the means of deceiving his less knowing contemporaries; while his fortune enabled him to run over Europe to exhibit these marvels, and excite the admiration of the crowd. The strange part he thus imposed upon himself he played out to the last; and it forms the most remarkable portion of his mysterious history. But there have been other men who have not hesitated to sacrifice their wealth, talents, and even lives to the propagation of an error, solely that they might enjoy the short-lived fame of being a celebrity.

BRED IN THE BONE.

CHAPTER XLIII.—THE SMOKING-ROOM OF THE GEORGE AND VULTURE.

ROBERT BALFOUR did not remain at Turlock, as he had originally intended. Perhaps the vicinity to Wheal Danes was not so attractive to him as he had promised himself that it would be, although not for a single instant did his purpose of revenge relax. Other considerations, had he needed them, were powerful, now that he had taken the first step, to keep him on that terrible path which he had so long marked out for himself. To disclose the position of his victim now, would have been not only to make void his future plans, but to place his own fate at Solomon's mercy. Yet he found his heart less hard than the petrifaction it had undergone, the constant droppings of wrong and hardship for twenty years, should have rendered it. He did not wake until late, and the first sound that broke upon his ear was the tinkling of the bell of the little church, for it was Sunday morning. He compared it for a moment with something that he had been dreaming of: a man in a well chipping footsteps for himself in the brick wall, up which he climbed a few feet, and then fell down again. Then a pitiful, unceasing cry of 'Help, help!—help, help!' rang in his ears, instead of the voice that called people to prayers. Even when that ceased, the wind and rain—for the weather was wild and wet—beating against the window-pane, brought with them doleful shrieks. Sometimes a sudden gust seemed to bear upon it confused voices and the

tramp of hurrying feet; and then he would knit his brow and clench his hand, with the apprehension that they had found his enemy, and were bringing him to the door. Not the slightest fear of the consequences to himself in such a case agitated his mind; he had quite resolved what to do, and that no prison walls should ever hem him in again; but the bare idea that Solomon should escape his vengeance drove him to the brink of frenzy. He would have left the place at once, but that he thought the coincidence of his departure with the disappearance of his foe might possibly awaken suspicion; so he staid on through the day, waiting for the news which he knew must arrive sooner or later. At noon, he thought the landlady wore an unusually grave air, and he felt impelled to ask her what was the matter. But then, if there was nothing—if she only looked sour, as folks often did, just because it was Sunday—she might think him too curious.

From his window, a little later, he saw a knot of people in the rain talking eagerly together, and one of them pointing with his hand towards Gethin. But they were too far off to be overheard, and he did not dare go down and interrogate them. It was his object to appear utterly indifferent to local affairs, and as a total stranger. He felt half-stifled within doors, and yet, if he should go out, he knew that he would be uncontrollably impelled to take the cliff-path that he had followed the preceding night; to watch that nobody came near the place that held his prey, and thereby, like the bird who shews her nest by keeping guard too near, attract attention. The tidings for which he waited came at six o'clock, just as he was sitting down to his dinner. The parlour-maid who served him had that happy and excited look which the possession of news, whether it be good or bad, but especially the latter, always imparts to persons of her class.

'There's strange news come from Gethin, sir,' said she, as she arranged the dishes.

'Indeed,' said Balfour carelessly; though he felt his brain spin round and his heart stop at the same moment. 'What is it?'

'Mr Coe, sir, a very rich man—he as owns all Dunloppel—has disappeared.'

'How's that?'

'Well, sir, he went to his room last night, they say, at his usual hour, but never slept in his bed, and the front-door was found unlocked in the morning; so that he must have gone away of himself. That would not be so odd, for he is a secret sort of man, as is always coming and going; but he has taken nothing with him; only the clothes he stood in.'

'Well, I daresay he has come back again by this time, my good girl.—What's this? Is there no fish?'

'No, sir; the weather was too bad yesterday for catching them, and all last night there was a dreadful sea: that's what they fear about Mr Coe—that he has fell into the sea. His footsteps have been tracked to the cliff edge, and there they stop.'

'Poor fellow! Has he any relatives?'

'O yes, sir: a wife and son—a very handsome nice young gentleman.'

'Then his widow will be rich, I suppose?'

'Oh, pray, don't call her a widow yet, sir; let us hope her husband may be found. It's a dreadful thing to be drowned like that on a Sunday morning; and for one who knows the cliff-path so well as he did too. He was a hard man, and no favourite, but one forgets that now, of course.'

'You have also forgotten the Harvey Sauce, my good girl; oblige me by bringing it, will you?' said Mr Balfour, beginning to whistle something which did not sound like a psalm-tune. 'You must excuse my hard-heartedness, but I had not the pleasure of knowing this gentleman.'

An hour afterwards, the solitary guest had left the inn, and was on his road to Plymouth. His departure caused little surprise, for the weather was such as to induce no visitor to prolong his stay.

Whether from his long enforced abstinence from society, or from the unwelcome nature of his thoughts, Robert Balfour was always disinclined to be alone. His expeditions with Charley in search of pleasure had been, though he did not find pleasure, more agreeable to him than the being left to his own resources; and now this was more the case than ever. He preferred even such company as that which the smoking-room of a hotel afforded, to none at all. The voices of his fellow-creatures could not shape themselves, as every inarticulate sound did to his straining ear, into groans and feeble cries for aid. Not twenty-four hours had elapsed since his prisoner was placed in hold, so that such sounds of weakness and agony must have been in every sense chimerical; and yet he heard them. What, then, if these echoes from the tomb should always be heard? A terrible idea indeed, but one which bred no repentance. It was not likely that remorse should seize him in the very place where his hated foe had clutched and consigned him to his living grave.

The hotel at which he now put up was the same at which he had then lodged; this public room was the same in which he had smoked his last cigar upon his fatal visit to the Miners' Bank. He had had only one companion then, but now it was full of people. By their talk it was evident that they were townsfolk, and all known to one another; in fact, it was a tradesmen's club, which met at the *George and Vulture* on Sunday nights through the winter months. In spite of his willingness to be won from his thoughts, he could not fix his attention on the small local gossip that was going on about him. Men came in and out without his observing them; and indeed it was not easy to take note of faces through the cloud of smoke that filled the room; he was fast relapsing into his own reflections, wondering what Solomon was doing in the dark, and if he slept much, when an event occurred which roused him as thoroughly as the prick of a lance, or a sudden douche of cold water.

'Let us have no misunderstanding and no obligation—that is my motto.'

The speaker was a thin gray man, whose entrance into the apartment Balfour had not perceived, and who was seated in an elevated chair, which had apparently been reserved for him as president of the assembly. The face was unfamiliar, for twenty years had made an old man of the astute and lively detective; but his phrase, and the manner of

delivering it, identified him at once as his old friend Mr Dudge.

'It was in this very room,' continued the latter, 'that I sat and talked with him as sociable as could be, not a quarter of an hour before I put the darbies on him; and it's a thing that has been upon my mind ever since. I was only doing my duty, of course, but still it seemed hard to take advantage of such a frank young fellow. As for stealing them notes, it's my belief he had no more intention of doing it than I had.'

'And yet he got it hot at the 'sises, Mr Dudge, didn't he?' inquired one of the company.

'Got it hot, sir?' replied Mr Dudge with dignity: 'he got an infamous and most unjustly severe sentence, if you mean that, sir. Of course, what he did was contrary to law, but it's my opinion as the law was strained agin him. There was some as swore hard and fast to get him punished, as knew he deserved no such treatment. Why, the girl as he loved—and whose picture I found upon him myself when I searched him, and gave it him back too, ay, that I did—even she took a false oath, as Weasel himself told me, who was his lawyer, and had built up his case with that same hussy for its corner-stone. Ah!' said Mr Dudge, with a gesture of abhorrence, 'if there ever was a murdered man, it was that poor young fellow, Richard Yorke.'

'But I thought he got twenty years' penal servitude,' observed the same individual who had interposed before, and whose thankless office it seemed to be to draw the old gentleman out for the benefit of society.

'I say he was murdered, sir. He was shut up for nigh twenty years, and then shot in the back in trying to get away from Lingmoor. It was the hardest case I ever knew in all my professional experience. Lord, if you had seen him; the handsomest, brightest, gayest young chap! And he was what some folks call well born too; he was the son, that is—though in a left-handed sort of way, it's true—of mad Carew of Crompton, about whose death the papers were so full a month ago or so—and that, in my judgment, was the secret of all his misfortune: it was the Carew blood as did it. To take his own way in the world; to seek nobody's advice, nor use it, if 'twas given; to be spoiled and petted by all the women and half the men as came nigh him; to own no master, nor authority; to act without thought, and to scorn consequences—well, all that was bred in the bone with him.'

'Then he had never any one to look after him at home, I reckon, Mr Dudge?'

'Well, yes; he had a mother; and though she was a queer one too, she loved him dearly. She was the cleverest woman, Weasel used to say, as ever he had to do with; and a perfect lady too, mind you. She worked to get the poor lad off like a slave; and when all was over, instead of breaking down, as most would, she swallowed her pride, and went down on her bended knees to that old miserly devil Trevethick, the prosecutor, and to his son-in-law Coe, likewise: they lived down Cross Key way—where was it?—at Gethin—and begged and prayed him to join in petitioning in her son's favour. She got down there the very day after his lying daughter was married to Solomon Coe, he as has got Dunloppel, and is a big man now. But he'll never be anything but a scurvy

lot, if he was to be king o' Cornwall. I shall never forget the way he insulted that poor young fellow when he was took up! Damme, I would have given a ten pound note to have had him charged with something, and I'd ha' seen that the handcuffs weren't none too big for his wrists neither.'

'And this Trevethick refused to help the lady, did he?'

'Why, of course he did. He broke her heart, poor soul. I saw her when she passed through Plymouth afterwards, and she looked twenty years older than before that trial. Even then she didn't give the matter up, but laid it before the crown. But poor Yorke had offended government—helped some fool or another through one of them public examinations; he had wits enough for anything, had that young fellow. But, there—I can't abear to talk about him; and yet somehow I can't help doing on it when I get into this room. He sat just where that gentleman sits, yonder. I think I see him now, smoking the best of cigars, one of which he offered to me—for he was free as free; but I was necessitated to restore it, for I couldn't take a gift from one as I was just a-going to nab. Thank you kindly, says I, but Let us have no misunderstanding and no obligation. Poor fellow! poor fellow!'

No more was said about the case of Richard Yorke; but it was evidently a standing topic with the chairman of the *George and Vulture Club*. A yearning to behold and embrace that mother who had done and suffered so much for his sake, took possession of Richard's soul. His heart had been steeled against her, when he found harboured under her roof the objects of his rage and loathing; but he felt now that that must have come to pass with some intention of benefit to himself. The very truth, indeed, flashed upon him that she entertained some plan of frustrating his revenge against them, with the idea of protecting him from the consequences that were likely to ensue from it; and he forgave her, while he hated his foes the more. He would carry out his design to the uttermost, but very cautiously, and with a prudence that he would certainly not have used had his own safety been alone concerned; and then, when he had avenged himself and her, he would disclose himself to her. The statement he had just heard affected him deeply, but in opposite ways. The justification of himself in no way moved him—he did not need that; it was also far too late for his heart to be touched by the expression of the old detective's good-will, though the time had been when he would have thanked him for its utterance with honest tears; but the revelation of his mother's toil and suffering in his behalf, re-awakened all his dormant love for her, while it made his purpose firmer than ever to be the Nemesis of her enemies and his own.

As he went to bed that night, the clock struck twelve. It was just four-and-twenty hours since he had left his victim in the bowels of Wheal Danes. If a free pardon could have been offered to him for the crime, and the mine been filled with gold for him to its mouth, he would not have stretched out his hand to save him.

CHAPTER XLIV.—STILL HUMAN.

Mr Balfour atoned for his previous indifference to the wares of the newsboy by sending him next

morning to the station for all the local papers. In each, as he expected, there was a paragraph headed *Mysterious Disappearance*, and as lengthened an account as professional ingenuity could devise of the unaccountable departure of Mr Solomon Coe from his house at Gethin. The missing man was 'much respected'; and 'as the prosperous owner of the Dunloppel mine, which had yielded so largely for so many years, he could certainly not have been pressed by pecuniary embarrassments; and therefore the idea of suicide was out of the question.' Unlikely as it seemed in the case of one who knew the country so well, the most probable explanation of the affair was that the unfortunate gentleman, in taking a walk by night along the cliff-top, must have slipped into the sea. The weather had been very rough of late, and the wind blowing from off the land, which would have accounted—if this supposition was correct—for the body not having been washed ashore. 'In the meantime, an active search was going on.'

Balfour had resolved not to return to London for at least ten days. Mrs Coe and her son would, without doubt, be telegraphed for, and he could not repair to their house in their absence: the idea of being under the same roof alone with his mother was now repugnant to him. He felt that he could not trust himself in such a position. It had been hard and grievous, notwithstanding his resentment against her, to see her in company with others, and her absence of late from table had been a great relief to him. With his present feeling towards her, it would be impossible to maintain his incognito; and if that was lost, his future plans—to which he well knew she would oppose herself—would be rendered futile. He had seen with rage and bitter jealousy that both Harry and her boy, and especially the latter, were dear to her; and it was certain she would interfere to protect them, for their sake as well as for his own. He had other reasons also for not returning immediately to town. It might hereafter be expedient to shew that he *had* really been to Midlandshire, where he had given out he had designed to go; and, moreover, though his purpose was relentless as respected Solomon, he did not perhaps care to be in a house where hourly suggestions would be dropped as to the whereabouts of his victim, or the fate that had happened to him. Harry and her son might even not have gone to Gethin, and in that case their apprehensions and surmises would have been insupportable.

Richard was more human than he would fain believe himself to be. Though he had gone to bed so inexorable of purpose, it had been somewhat shaken through the long hours of a night in which he had slept but little, and waked to think on what his feverish dreams had dwelt upon—the fate of his unhappy foe, perishing slowly beside his useless treasure. More than once, indeed, the impulse had been strong upon him that very morning to send word anonymously where Solomon was to be found to the police at Plymouth. Remorse had not as yet become chronic with him, but it seized him by fits and starts. There had been a time when he had looked (through his prison bars) on all men with rage and hatred, but now he caught himself, as it were, at attempts at self-justification with respect to the retribution he had exacted even from his enemy. Had he not been rendered miserable, he argued,

supremely wretched, for more than half his lifetime, through this man's agency; for it was certain that Solomon had sworn falsely, in the spirit, if not in the letter, and caused him to be convicted of a crime which, his rival was well aware, he had not in intention committed. His conduct towards him on the occasion of his arrest had also been most brutal and insulting; while, after conviction had been obtained, this wretch's malice, as Mr Dudge had stated, had known no cessation. In the arms of his young bride, he had been deaf to the piteous cry of a mother beseeching for her only son.

But, on the other hand, had not he (Richard) deeply wronged this man in the first instance? Had he not robbed him—for so much at least must Solomon have known—of the love of his promised wife? If happiness from such an ill-assorted union was not to have been anticipated, still, had he not rendered it impossible? If their positions had been reversed, would not he have exacted expiation from such an offender to the uttermost? He would doubtless have scorned to twist the law as Solomon had done, and make it, as it were, the crooked instrument of his revenge. He would not, of course, have evoked its aid at all. But was that to be placed to his credit? He had put himself above the law throughout his life; he had never acknowledged any authority save that of his own selfish will; nay, he owned to himself that his bitterness against his unhappy victim had been caused, not so much by the wrong he had suffered at his hands, as by the contempt which he (Richard) had entertained for him. Without materials, such as his father had possessed, to back his pretensions, he had imagined himself a sort of irresponsible and sovereign being. (Such infatuation is by no means rare, nor confined to despots and brigands, and when it exists in a poor man, it is always fatal to himself.) His education, if it could be called such, had doubtless fostered this delusion; but Mr Dudge was right: the Carew blood had been as poison in his veins, and had destroyed him.

All this might be true; but such philosophy could scarcely now obtain a hearing, while his enemy was dying of starvation in his living tomb. It was in vain for him to repeat mechanically that he had also suffered a sort of lingering death for twenty years. The present picture of his rival's torments presented itself in colours so lively and terrible, that it blotted out the reminiscence of his own. The recollection of his wrongs was no longer sufficient for his vindication; he therefore strove to behold his victim in another light than as his private foe—as the murderer of his friend Balfour, the history of whose end may here be told.

On the night that Richard escaped from Lingmoor, it was Balfour, of course, who assisted him, and who was awaiting him in person at the foot of the prison wall. The old man's arms had received him as he slipped down the rope; and the object at which the sentry had fired had been two men, though in the misty night they had seemed but one. Balfour had been mortally wounded; and it was with the utmost difficulty that, laden with the burden of his dying friend, Richard had contrived to reach Bergen Wood. As his own footsteps were alone to be traced along the moor, the idea of another having accompanied his flight—though they knew there was complicity—had not occurred to the authorities. Balfour had hardly reached that wretched asylum when he expired, pressing

Richard's hand, and bidding him remember Earl Street, Spitalfields. 'What you find there is all yours, lad,' was his dying testament, and last words of farewell. And, over his dead body, Richard swore anew his vow of vengeance against the man that had thus, though indirectly, indeed, deprived him of his only friend. He had watched by the dead body, on its bed of rotten leaves, through that night and the whole of the next day; then, changing clothes with it, he had fled under cover of the ensuing darkness, and got away eventually to town.

He had found the house in Earl Street a wretched hovel, tenanted by a few abjects, whom the money found on Balfour—which he had received on leaving prison—was amply sufficient to buy out. Once alone in this tenement, he had easily possessed himself of the spoil so long secreted; and furnished with it, he had hastened down to Crompton—the news of Carew's death having reached London on the very day that he found himself in a position to profit by it. The very plan which he had suggested to Balfour, whose name he also assumed, he himself put into execution. He made a private offer for the disused mine, which was gladly accepted by those who had the disposal of the property, acting under the advice of Parson Whympier. Trevethick, the only man that had attached any importance to the possession of it, was dead; and it was not likely that any one at the sale should bid one-half of the sum which this stranger was prepared to give for the mere gratification of his whim. The mine itself, indeed, had scarcely been mentioned in the transaction; it merely formed a portion in the lot comprising the few barren acres on which this capricious purchaser had expressed his fancy to build a home. 'Disposed of by private contract' was the marginal note written in the auctioneer's catalogue, which dashed Solomon's long-cherished hopes to the ground.

Richard staid on in the neighbourhood to attend the sale. It attracted an immense concourse; and no less than a guinea a head was the price of admission to those who explored the splendid halls of Crompton, discussing the character of its late owner, and retailing wild stories of his eccentricities. Poor Parson Whympier, who had not had a shilling left to him—for Carew had died intestate, though, thanks to him, not absolutely a beggar—was perhaps the only person present who felt a touch of regret. He had asked for his patron's signet-ring, as a keepsake, and this request had been refused on the part of the creditors; he wandered among the gay and jeering crowd like a ghost, little thinking that the one man who looked at him with a glance of pity was he whom he had once regarded as the heir of Crompton. It was the general opinion now that the unhappy chaplain had been Carew's evil genius, and had 'led him on.' Even Richard bestowed but that single glance upon him; he was looking in vain for the face that had so terrible an interest for himself; he had not heard that Trevethick was dead, but he knew it was so the instant that his eyes fell upon Solomon Coe, and all his hate was at once transferred to his younger enemy. The business upon which this man had come was as clear to him as though it had been written on his forehead. The first gleam of pleasure which had visited his dark soul for twenty years was the sight of Solomon's countenance

when, on the sixth day's sale, the auctioneer gave out that lot 970 had been withdrawn. Solomon might have received the intimation long before, but for the cautious prudence which had prevented him from making any inquiries upon the subject. For a minute or two he stood stunned and silent, then hurriedly made his way to the rostrum. Richard, who was sitting at the long table with the catalogue before him, kept his eyes fixed upon its pages while the auctioneer pointed him out as the purchaser of the lot in question. He knew the inquiry that was being asked, and its reply; he knew whose burly form it was that thrust itself the next minute in between him and his neighbour: every drop of blood in his body, every hair on his head, seemed to be cognisant that the man he hated most on earth was seated cheek by jowl with him, that the first step in the road of retribution had been taken voluntarily by his victim himself. The rest is soon told. Solomon at once commenced his clumsy efforts at conciliation; and his endeavours to recommend himself to the stranger's friendship were suffered quickly to bear fruit. He invited him to his house in London, which, to Richard's astonishment and indignation, he found to be his mother's home; and, in short, fell of his own accord into the very snare which the other, had he had the fixing of it, would himself have laid for him.

And now, as we have said, when all had gone exactly as Richard would have had it go, and Solomon was being punished to the uttermost, the executor of his doom was beginning to feel, if not compunction, at all events remorse. No adequate retribution had indeed overtaken Harry: to have made her a widow, was, in fact, to have freed her from the yoke of a harsh and unloved master; but the fact was, notwithstanding the perjury of which he believed her to have been guilty, he had never hated her as he had hated the other authors of his wrongs. She had once on the rock-bound coast at Gethin preserved his life; she had accorded to his passion all that woman can grant, and had reciprocated it; not even in his fiercest hour of despair had he harboured the thought of raising his hand against her; he had hated her, indeed, as his betrayer, and as Solomon's wife, but never regarded her with that burning detestation which he felt towards her husband. There was another motive also, though he did not even admit it to himself, which, now that his chief foe was expiating his offence, had no inconsiderable weight in the scale of mercy as regarded the others.

His endeavours to win Charley's favour had had a reflex action. In spite of himself, a certain good will had grown up in him towards this boy, whom his mission it was to ruin. If there had been less of his mother in the lad's appearance, or anything of his father in his character, his heart might have been steeled against his youth and innocence of transgression. As a mere son of Solomon Coe's, he would have beheld in him the whelp of a wolf, and treated him accordingly; but between the wolf and his offspring there was evidently as little of affection as there was of likeness. The very weaknesses of Charley's character—his love of pleasure, his credulity, his wayward impulsiveness, of all which Balfour had made use for his own purposes—were foreign to the nature of the elder Coe; while the lad's high spirit, demonstrativeness, and geniality were all his own. If he had one to guide as well as love him—a woman

with sound heart and brain, such as this Agnes Aird was represented to be, what a happy future might be before this youth! Without such a wise counsellor, how easy it would be, and how likely, for him to drift on the tide of Self-will and Self-indulgence to the devil! The decision rested in Richard's own hands, he knew. Should he blast this young life in the bud, in revenge for acts for which he was in no way accountable, and which were already being so bitterly expiated? The apprehension that Solomon might even yet be found alive, perhaps alone prevented Richard from resolving finally to molest Harry and her son no further. If his victim should have been rescued, his enmity would have doubtless blazed forth afresh against them, as inextinguishable as ever, but in the meantime it smouldered, and was dying out for want of fuel. If he had no penitence with respect to the terrible retribution he had already wrought, the idea of it disturbed him. If he had no scruples, he had pangs: when all was over—in a day or two—for even so strong a man as Solomon could scarcely hold out longer—he would doubtless cease to be troubled with them; when he was once dead, Richard did not fear his ghost; but the thought of this perishing wretch at present haunted him. He was still not far from Gethin, and its neighbourhood was likely to encourage such unpleasant feelings; he had only executed a righteous judgment—since there was no law to right him; but even a judge would avoid the vicinity of a gallows on which hangs a man on whom he has passed sentence.

He would go into Midlandshire—where he was now supposed to be—until the affair had blown over. That watching and waiting for the Thing to be discovered would, he foresaw, be disagreeable, nervous work. And when it happened, how full the newspapers would be of it! How Solomon got to the place where he would be found, would be as much a matter of marvel as the object of his going there. If the copper lode—the existence of which Richard did not doubt—were discovered, as it most likely would be when the mine became the haunt of the curious and the morbid, it was only too probable that public attention would be drawn to the owner. The identification of Richard Balfour with the visitor who had visited Turlock, might then be established, whence would rise suspicion, and perhaps discovery. Richard had no terrors upon his own account, but he was solicitous to spare his mother this new shame. He had been hitherto guiltless in her eyes, or, when blameworthy, the victim of circumstances; but could her love for him survive the knowledge that he was a murderer? But why encourage these morbid apprehensions? Was it not just as likely that the Thing would never be discovered at all? Once set upon a wrong scent, as folks already were, since the papers had suggested the man was drowned, why should they ever hit upon the right one? Wheal Danes had not been explored for half a century. Why should not Solomon's bones lie there till the judgment-day?

At this point in his reflections, the door opened—he was taking his breakfast in a private sitting-room—and admitted, as he thought, the waiter. Richard stood in such profound thought that it was almost stupor, with his arms upon the mantelpiece, and his head resting on his hands. He did not change his posture; but when the door closed,

and there was silence, in place of the expected clatter of the breakfast things, he turned about, and beheld Harry standing before him—in deep black, and, as it seemed to him, in widow's weeds!

THE MONTH:

SCIENCE AND ARTS.

For some time past the authorities of the British Museum have been publishing a series of Guides, Indexes, and Catalogues at a low price, by which any intelligent person may make himself acquainted with the vast collections there exhibited, and render his visits alike instructive and interesting. This would be a happy change from the mere idle lounge which a walk through the Museum is at present for most of the visitors; and is one of the cases in which even a little knowledge may be turned to good account. For example, the *Guide to the Autograph Letters, Manuscripts, Original Charters, and Royal, Baronial, and Ecclesiastical Seals* exhibited in the Department of Manuscripts, tells the visitor where to look for the article he wishes to see, and gives him some account of it. With this little book in his hand, he may walk from case to case, and examine the treasures therein displayed to his heart's content—letters written by Luther, Calvin, Erasmus, Cardinal Wolsey, John Knox, Sir Walter Raleigh, John Hampden, Prince Rupert, William Penn, Sir Isaac Newton, Michael Angelo, Albert Dürer, and many others; kings, queens, poets, painters, orators, and politicians. Add to all this the other articles above mentioned, and it will be seen that the Manuscript room contains attractions of a high order.

Another book gives ample explanations of what is to be seen in the departments of Natural History and Antiquities, besides lists of the portraits hanging on the walls. With this book in his hand, a parent might entertain and instruct his children, or a schoolmaster his troop of boys, while walking among the birds, beasts and fishes, the plants, the fossils or minerals, or among the ancient sculptures, monuments, vases, and other relics. Whatever article any one may desire to see, can be easily found by means of the Guide. Many of the drawings by old masters, and the best of the sculptures, have been photographed; and at the end of the Guide a list of the photographs, with their price as sold at the Museum, is given. There is also a list of books and other works published by the Museum; and it may now be said that it is not the fault of the authorities if the public do not get all the benefit for science, art, and literature which the Museum offers to all comers. Moreover, we have good reason to believe that the trustees of the Museum would be disposed to lend many of their surplus treasures for exhibition in the provinces, if satisfactory assurance could be given that they would be properly cared for. If Manchester, Liverpool, Bristol, or any other large town would provide a suitable building, they might,

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with reasonable hope of success, ask the British Museum to stock it. This would perhaps settle the question as to enlarging the Museum by additional buildings, for if all the surplus articles were lent out, there would be room enough for the collections left behind.

The growing conviction that science should be taught in our universities is bearing fruit. The Chancellor of Oxford and the Chancellor of Cambridge have offered to build, each at his own cost, a physical laboratory in the university over which he presides. By this handsome offer, the chancellors shew that they understand the signs of the times, and what is meant by the promotion of scientific studies. It is to be hoped that the students, when they find a well-furnished laboratory provided for their use, will also shew that they understand what is meant by experimental science. The characteristic defect of the present day is want of earnestness among students.

A paper on Deep-Sea Soundings, read before the Royal Dublin Society by Mr Andrews, contains a few interesting particulars of marine natural history, and of what may be called the ocean topography of the west of Ireland. Some idea of the labour involved in a survey of the bottom of the sea may be inferred from the statement that 23,000 casts of the lead were made in surveying 220 square miles on the coast of Donegal. On an average, thirty-five casts to the square mile were made in deep water, and 625 to the mile in the ten fathoms' depth. Soundings equally careful and numerous have been made on the coast of Waterford and Wexford, and it might have been supposed that after such a close examination the bottom was fully known. Yet, since those soundings were taken, a large and valuable oyster-bed has been discovered by a boat-party searching for a gold watch that had dropped overboard.

It has long been known that a current is constantly flowing into the Mediterranean from the Black Sea, and from the Atlantic, besides the numerous rivers pouring in always abundantly, and the question has often been asked: How is it that the great Midland sea does not become over-full? The answer is: Because, while a surface-stream flows in through the Strait of Gibraltar, a stream deep down is constantly flowing out; and the existence of this under-current is said to have been proved by a captain, who sunk a basket of stones by a rope to a considerable depth, where, being acted upon by the strong stream, it towed the boat out against the surface-current. Nevertheless, the existence of the under-current has been often questioned. Dr Carpenter, however, who has recently returned from a dredging-cruise in the Mediterranean, states that he took much pains to investigate this question, and that in a short time he will publish an account of the operations by which he ascertained that the outflowing under-current does really exist.

At a recent meeting of ironmasters in Birmingham, specimens were shewn of purified iron and

improved steel manufactured by Sherman's process, as it is called, after the name of the American inventor. Some samples of the steel tested at Chatham dockyard bore a tensile strain of seventy tons to the square inch, and were at the same time more ductile than any other specimens of the same strength. Common English rough iron by Sherman's method of treatment can be converted into bar steel equal in quality to the best Swedish; so tough and strong that a bar a half-inch square bore a strain of fifty-four tons to the square inch. The process by which these results are produced is as yet a secret; but we believe that the conversion takes place while the iron is in the puddling furnace.

Dr Voelcker, F.R.S., has analysed specimens of 'native guano,' prepared from town sewage by what is known as the A B C process, and he finds them generally of small value. A few pounds of bone-dust and dried blood, he says, which could be easily carried to the field in a bag, would embody the whole of the intrinsically valuable fertilising constituents of a ton of the native guano. And further, he remarks: 'I believe I am not overstraining a point by stating, as my deliberate opinion, that a ton of four out of the five samples of native A B C guano analysed by me, is barely worth as much as a ton of common farm-yard manure.' In these days of discussion and experiment on drainage and sewage, the foregoing conclusions are well worth consideration by all engaged in agriculture, especially as evidence is accumulating as to the great advantages derivable from the application of sewage in a liquid form.

Many beneficial uses have been found for carbolic acid, and naturalists now find that by washing out with it the inside of birds which they have not immediate time to skin and stuff, the birds can be kept a week or more in a sound and flexible condition. During the prevalence of the kine-pest, carbolic acid was largely used as a disinfectant; and farmers have discovered that the 'ticks' which infest sheep and lambs can be killed by dipping the animals in a bath of the acid diluted with water.

It sometimes happens that the Julian Period, as it is called in chronology, is insufficient for investigators who wish to make their time calculations with needful accuracy. Mr French (of West Point, state of New York) proposes to substitute a Precession Period, as he names it, for the one now in use; in setting forth its advantages, he says that it is founded wholly on astronomy, is exhaustless by being recurrent, has its initial point sufficiently far back for any conceivable historical purposes, gives to science a worthy unit for the vast durations it contemplates, and at the same time possesses the two practical utilities of the Julian Period—namely, furnishing the elements needed in the almanac for every year, and extending into the past a long and unaltering standard for time.

The time for the precession of the equinoxes is

25,872 years. Mr French places the beginning of his Precession Period 12,693 years B. C., when the point of the vernal equinox in the zodiac was near *Spica Virginis*, a brilliant star, forming a good point of departure. When the whole circle of the zodiac shall have been travelled, and the first degree of celestial longitude reappears once more near *Spica Virginis*, the period will be complete, and another will begin.

It is thus seen that the Precession Period admits of infinite extension, and the advantages it presents in astronomy and geology are great. We want a period larger than a year. A precession is a good one. Forty precessions make somewhat more than a million years, which is a fact that any one having to estimate long lapses of time could easily remember. The Julian Period consists of 7980 years; the Precession Period, beginning 12,693 B.C., does not end till 13,179 A.D. This is hardly the place for details of calculations, but we give one example to shew how Mr French makes his Precession Period as practically useful as the Julian. Add 1870 to 12,693, we have 14,563; divide this amount by 19, by 28, and by 15, and the several remainders will be 9, 3, and 13; precisely the same as would be found by similar treatment of the Julian number; and in this respect the Precession Period would be as useful to constructors of almanacs as the Julian Period.

Professor Loomis, of Yale College, Connecticut, states, as the result of his study of sun-spot observations, that the ten-yearly period of increase and decrease in the number of spots appears to be well made out, and that the length of the period is determined by the action of Jupiter and Saturn on the sun. According as these two planets are in conjunction or opposition, so is there a difference of periodical effect. The professor finds, further, that what is known among magneticians as the diurnal inequality of terrestrial magnetism, is, beyond a certain limit, occasioned by the amount of spots on the sun's surface, and that the number of displays of aurora are due also to the same solar influence. With reference to his own country, he remarks that 'auroral displays in the middle latitudes of America are generally accompanied by an unusual disturbance of the sun's surface on the very day of the aurora, and are therefore subject to some influence which emanates immediately from the sun.'

Two parties of astronomers and physicists have arrived from America to observe next month the eclipse of the sun which will be visible in the south of Europe and Northern Africa. One of these parties is authorised by the Naval Observatory at Washington, the other by the United States Coast Survey; and as they comprise some of the leading scientific men of the country, a successful result of the expedition may be looked for, should the weather prove favourable. We have already mentioned that observers are to go out to the Mediterranean from this country; hence, with the two nations at work, all the phenomena of the eclipse should be accurately noted.

Two other expeditions, which may have important results, have also been sent out by the United States government—one to each side of the Isthmus, to find, if possible, a route for a ship-canal from the Atlantic to the Pacific. The project for a railway is considered impracticable.

AUTUMN'S ALCHEMY.

Pensive Autumn, sadly sweet,
How thou dost thyself repeat;
Regularly coming round,
With the self-same garland bound.

What an alchemist art thou!
Verdant was the woodland; now
Every morning we behold
Bronze transmuted into gold.

Oh, thy Midas-touch forbear,
And what's left of greenness spare;
Else thou shalt have more, by much,
Than thy miser hand can clutch!

Talk we not of 'Christmas trees';
What can grander be than these?
Hung all o'er with golden coins,
Which the thievish gale purloins.

Victims of the year's caprice,
Leaves, your fleeting life must cease;
Ye unto that mother's lap
Falling, whence ye drank your sap.

Ye like dolphins die, retaining
Your best tints, till life be waning;
Trembling, ere ye drop beneath,
As at the approach of death.

Yet the trees, whereto ye cling
Desperately, will in spring
Brave in new apparel shew,
Which the sun will open throw.

My leaf also owns decay,
Fading, surely, day by day;
Oh, let it, while changing hue,
But transfigured be, like you,

'Neath the autumnal touch of time,
And affliction's frosty rime,
Lose each grosser earthly stain,
And a tinge of glory gain:

Then, although it shortly fall,
Sharing Nature's funeral,
I shall, in a fairer scene,
Flourish in perennial green.

In Preparation,

A

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